

## IT governance impact on financial reporting quality using COBIT framework

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### Abstract

The aim of this study is to demonstrate the impact of the application of information technology governance (COBIT) on the quality of financial reporting. To achieve the objectives of this study, we used the analytical descriptive approach to study the theoretical and practical studies in the subject with an extrapolation of the main results and presentation of them in order to increase the quality of the financial reports. The study found that there is a correlation between IT governance and the COBIT framework in its four dimensions on the quality of financial reporting. It has been shown that there is a positive relationship between these dimensions and the quality characteristics of financial reporting.

**Keywords:** IT governance (ITG), accounting information quality, corporate governance, quality of financial reporting, COBIT.

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## 1. Introduction

In recent years, a series of business collapse and accounting scandals have occurred such as Enron, WorldCom and others. In response to these scandals, the U.S. Congress passed the Sarbanes-Oxley (SOX) Act in 2002 to enhance financial reporting quality, provide protection to investors and other stakeholders, strengthen the internal controls and prevent financial statement fraud. Thus, the organisations should ultimately concern with the production of useful accounting information. The IT governance has increased considerably with the passage to the SOX, and several sections of this act directly affect the IT governance as it is considered as an integral part of overall enterprise governance.

The concept of information technology (IT) governance focused on the internal audit function by managers and auditors, especially after the successive scandals of large companies including Enron and Quest, which led to the enactment of the SOX Act in the USA. It contains the texts of interest to organisations involved in IT control and includes an emphasis on the existence of IT controls in companies, including COBIT framework, which was established to be a control tool on IT through 34 high-level supervisory goals, including under four dimensions: planning, organisation, ownership, implementation, delivery and follow-up. The COBIT framework contains seven criteria for information: effectiveness, efficiency, privacy, inclusiveness, availability, responsiveness and reliability, which interact within this framework through IT resources, individuals, applications, technology, facilities and data.

The content of COBIT is designed to inform and develop a set of generally accepted IT audit objectives for use by business managers, auditors and other users to benefit from the understanding of IT systems of organisations.

### 1.1. Research problem

The problem of this study is to examine the impact of IT governance on financial reporting quality to increase investor confidence in information reported in financial reports through the use of COBIT Framework. Hence, this study attempts to answer the following questions:

**What is the impact of the application of IT governance through the use of the COBIT framework on financial reporting quality?**

This main question can be divided into three subquestions as follows:

- **What IT Governance is all about?**
- **The extent to which IT governance is available through COBIT framework in companies?**
- **What is the quality of accounting information in financial reports prepared by companies?**
- **What impact IT governance have on the level applied under the COBIT framework?**

### 1.2. Aim of the study

The aim of this study is as follows:

- to measuring the quality of financial reports prepared by companies by assessing the availability of information characteristics in the preparation of financial reports,
- to identify the impact of IT governance through COBIT framework on the quality of financial reports prepared by companies.

### 1.3. Importance of the study

This study seeks to provide a theoretical contribution to the field of IT governance, financial reporting quality through the use of COBIT with its four areas [plan and organise (PO), acquire and

implement (AI), deliver and support (DS) and monitor and evaluate (ME)]. COBIT helps managers, auditors and users to understand enterprise IT systems, achieve a good level of information security and protect assets efficiently and effectively. It also contributes to the systematic examination and measurement of IT processes and resources in order to obtain the quality and comply with the requirements of control, through quality standards, control and information security.

#### 1.4. Study methodology

To answer the following question ‘information technology governance (ITG) and its impact on financial reporting quality’, we used the analytical descriptive approach to study the theoretical and practical studies in the subject with an extrapolation of the main results and presentation of them to increase the quality of the financial reports.

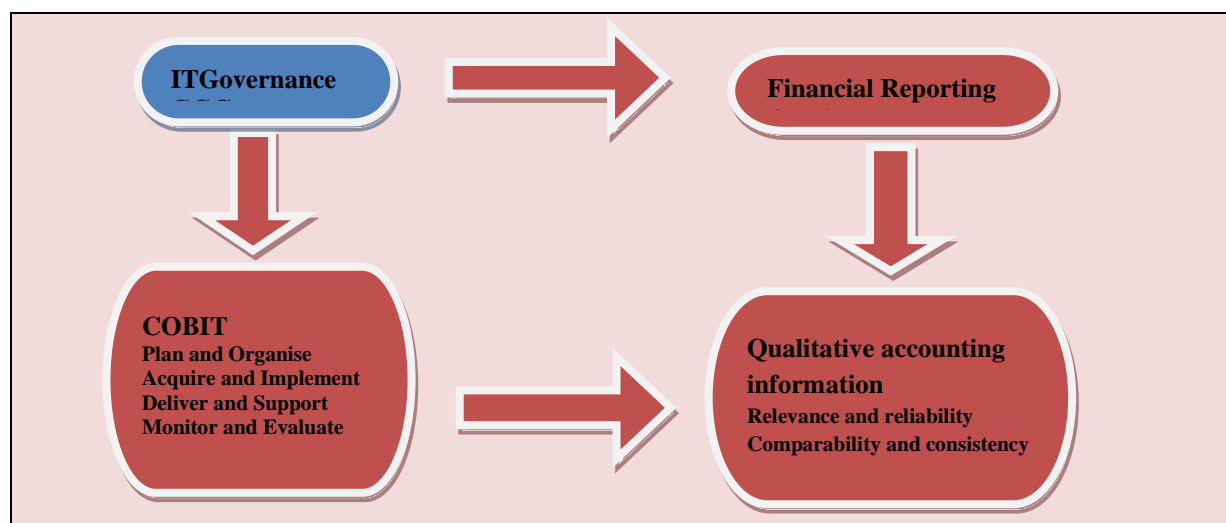
#### 1.5. Study hypotheses

Based on the problem and objectives of the study, we can formulate the following hypotheses :

H1—Quality of accounting information can be measured

H2—IT governance through the use of COBIT has an impact on financial reporting quality

#### 1.6. Study variables



#### 1.7. Prior studies

1. Abdu Elrahmen Study (2017)<sup>a</sup>: the main objective of this study was to demonstrate the impact of the application of corporate governance and IT governance on increasing the quality of accounting information. The researcher used the analytical descriptive approach. The results of the research show that there is a link between the application of corporate governance and IT governance. IT governance is a part of corporate governance, and its extension in the service companies listed on the Palestine Stock Exchange has led to an increase in the quality of accounting information.
2. Inaam M. Al-Zwyalif (2013)<sup>b</sup>: this study aimed to investigate the direct effects of IT governance, i.e., value delivery and strategic alignment, risk management, resource management and performance measurement, on the usefulness of accounting information provided by financial statements as well as indirect effects via its effect on the accounting information system (AIS). To attain these objectives, a questionnaire was developed and distributed to a sample of financial managers, IT

managers and internal auditors in the Jordanian industrial companies listed on the Amman Financial Market. The results showed that IT governance significantly and directly affects the usefulness of accounting information and AIS. However, this usefulness is significantly influenced by the AIS. It was also found that IT governance affects significantly and indirectly the usefulness of accounting information through its direct effects on the AIS.

### 1.8. Study axes

To answer the problematic questions, we are going to divide this study into three axes as follows:

**First:** IT governance conceptual framework (concepts and importance)

**Second:** COBIT framework and financial reporting quality

And **finally:** a case study.

## 2. IT governance conceptual framework

In recent years, IT governance has become integral to the effective governance of the modern enterprise. Businesses are increasingly dependent on IT to support critical business functions and processes and to successfully gain competitive advantage, and businesses need to manage effectively the complex technology that is pervasive throughout the organisation, in order to respond quickly and safely to business needs.

A new corporate governance model has emerged, with an increased emphasis on IT governance. IT governance consists of the leadership, organisational structures and processes, ensuring that an organisation's IT sustains and extends its strategies and objectives. It has been claimed that an organisation needs to provide an equivalent level of commitment to IT governance as it allocates to corporate governance, in order to achieve corporate success. IT governance has become a critical success factor in the achievement of corporate success, by deploying information through the application of technology.

### 2.1. IT governance concept

The definitions of IT governance vary widely, and Clifford (2006) pointed out that there is no single definition of IT governance. It is seen as a series of assertions that structures focus on processes and that the effectiveness of IT governance ensures that investment in IT adds value to business and reduces the risks associated with the operation and implementation of IT (Tuttle & Vandervelde, 2007). Some definitions of IT governance are presented as follows.

**Table 1. The most prominent definitions of IT governance**

Researcher	The definition
Australian Institute	The system through which current and future uses of IT are channelled and controlled, and the evaluation and guidance of plans for the use of IT in strengthening the company (Mtml: file: g./JPS Accounting Forums)
Jordan & Musson, 2005	(IT systems, performance management and risk management). It also focuses on helping them to work in line with global IT management standards. These include (infrastructure management, programming project management, information security management, technology plans and strategies Information). The objective is to help companies use their resources to achieve the objectives required.

ITGL, 2003	How the people responsible for the company's leadership take information technology into account in the process of supervision, control and management of the company, how the application of IT in the company has a decisive impact on whether the company will achieve its vision and mission and strategic objectives.
IT Governance Institute, 2003	Is the responsibility of the Board of Directors and Executive Management and is an integral part of corporate governance and consists of leadership, organisational structures and processes, ensuring that the organisation's IT supports and highlights the objectives and strategies of the enterprise.
Lan & Bill, 2005	An integrated set of actions, policies, responsibilities and organisational structures associated with information technology to support effective decision-making.
Abdul Rahman, 2013	Is an effective tool or tool in the enterprise by creating flexibility in IT and in information systems, structures and operations as it is seen as the regulatory capacity to control the installation and implementation of an IT strategy and is a guide for the appropriate direction to achieve a competitive advantage for the enterprise.
Patel, 2002	Is an effective tool in the enterprise to create flexibility in information technology and information systems, structures and processes. It is seen as the regulatory capacity to control the installation and implementation of an IT strategy and is a guide for the right direction to achieve a competitive advantage for the enterprise

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Source: Al Hila, Alhelou, Al Shobaki and Abu Naser (2017).

## **2.2. IT governance importance**

IT governance has become very topical for a number of reasons:

- In the wake of Enron and other corporate scandals, 'governance' generally has taken on even greater significance. IT has a pivotal role to play in improving corporate governance practices.
- Management's awareness of IT related risks has increased.
- There is a focus on IT costs in all organisations.
- There is a growing realisation that more management commitment is needed to improve the management and control of IT activities.

## **3. IT governance impact through COBIT framework on financial reporting quality**

As all IT activities require effective control to obtain quality in the financial reports prepared by the enterprises and as the COBIT framework constitutes an IT control tool, we are going to examine the impact of the practical application of IT governance through COBIT framework on financial report quality. Hence, let us first describe –

- what COBIT is all about, its objectives, principles and framework?
- How does COBIT support the Governance of IT?
- How IT Governance can have an impact on financial reporting quality through COBIT Framework?

### **3.1. COBIT: Control objectives for IT and related technologies**

**Controls:** The policies, procedures, practices and organisational structures were designed to provide reasonable assurance that business objectives will be achieved and undesired events will be prevented or detected and prevented.

**Control Objectives:** The statement of the desired result or purpose can be achieved by implementing control procedures in a particular IT activity.

**COBIT Principles:**

1. Meeting stakeholder needs
2. Covering the enterprise end-to-end
3. Applying a single integrated framework
4. Enabling a holistic approach
5. Separating governance from management (Fig. 1)

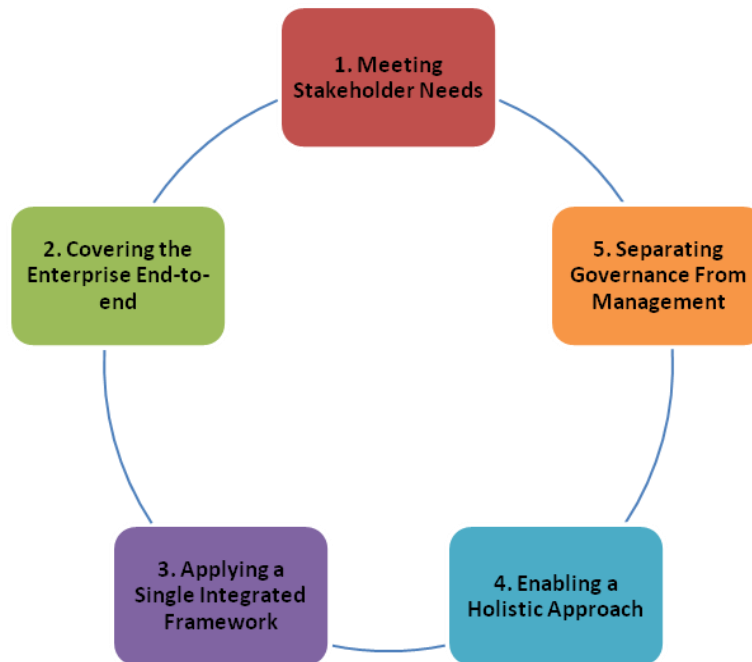


Figure 1. Five principles of COBIT. Source: Aqel (2013).

**3.2. COBIT framework**

It is a tool used to control IT work developed by the Institute of Information Technology Governance (ITGI) in the United States of America in 1992, and the framework defines 34 high-level goals to control the operations of IT. It also provides auditors with a set of measurements, and the accepted indicators for good governance help them express their opinion on the organisation. COBIT was first published in , followed by the second bulletin in 1998, the third in 2000 and the fourth in 2005. The fifth edition of COBIT 5 is released in 2012, and this version focused on value creation and risk management and has not still been implemented effectively.

COBIT is an IT risk management framework that helps managers, auditors and users understand their IT systems, helps develop a governance model and guides the choice of security and control to protect corporate assets, efficiently and efficiently.

**3.2.1. How does COBIT support the governance of IT?**

COBIT supports IT governance by providing a framework to ensure that:

- IT is aligned with the business
- IT enables the business and maximises benefits

- IT resources are used responsibly
- IT risks are managed appropriately

COBIT framework defines 34 processes which are divided into four dimensions (Table 2).

**Table 2. COBIT framework**

PO	AI	DS	ME
Provides direction to solution delivery (AI) and service delivery (DS)	Provides the solutions and passes them to be turned into services	Receives the solutions and makes them usable for users	Monitors all processes to ensure that the direction provided is followed

Source: **Comparison of it governance framework—COBIT, ITIL, BS7799.**

In Table 2, it is clear that building the COBIT framework enables auditors to identify and know the regulatory issuances and bulletins of the IT infrastructure, as well as help them enhance the results of their reports.

### 3.2.2. COBIT—Information standard quality

COBIT used seven standards related to information quality such as effectiveness, efficiency, confidentiality, integrity, availability, compliance and reliability.

Based on these seven criteria, there are three basic information requirements (COBIT 4.1, 2007)

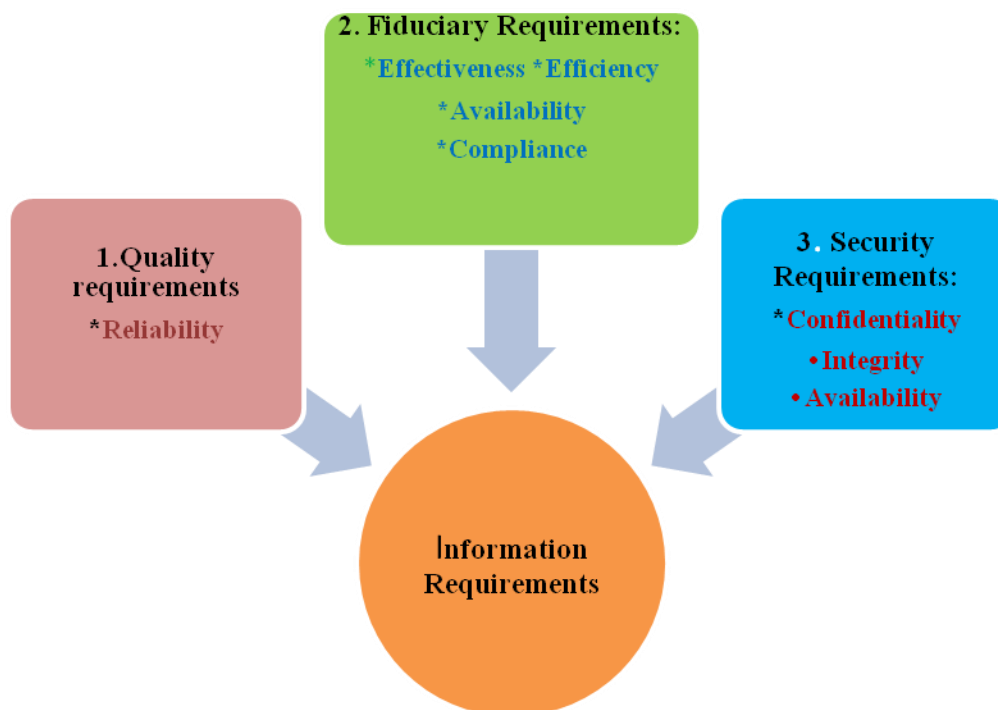


Figure 2. Information requirements. Source: COBIT 4.1 (2007) framework

### 3.3. Financial reporting quality

The quality according to the Office of Government Commerce (2009, p. 48) is a degree to which a set of inherent characteristics fulfil requirements. The quality is generally defined as the totality of features and inherent or assigned characteristics of a product, person, process, service and/or system, which bear on its ability to show that it meets expectations or satisfies stated needs, requirements or specification.

The financial reporting quality can be defined in terms of the fundamental and enhancing qualitative characteristics underlying decision usefulness as defined in the CF (IASB, 2018). The fundamental qualitative characteristics (i.e., relevance and faithful representation) are most important and determine the content of financial reporting information. The enhancing qualitative characteristics (i.e., understandability, comparability, verifiability and timeliness) can improve decision usefulness when the fundamental qualitative characteristics are established. However, they cannot determine financial reporting quality on their own (IASB, 2018).

According to the IASB, the essential principle of assessing the financial reporting quality is related to the faithfulness of the objectives and quality of disclosed information in a company's financial reports. These qualitative characteristics enhance the facilitation of assessing the usefulness of financial reports, which will also lead to a high level of quality. To achieve this level, financial reports must faithfully be represented, comparable, verifiable, timely and understandable. Thus, the emphasis is on having transparent financial reports and not having misleading financial reports to users, not to mention the importance of preciseness and predictability as indicators of a high financial reporting quality.

As it is defined in the Conceptual Framework for the Financial Reporting of the FASB and IASB, there are elements agreed on the high-quality financial reporting. The qualitative characteristics of financial reporting quality include relevance, faithful representation, understandability, comparability, verifiability and timeliness. They are divided into fundamental and enhancing qualitative characteristics.

The conceptual framework (2010) identifies comparability, verifiability, timeliness and understandability as the four enhancing qualitative characteristics.

### **3.3.1. Approaches to measure and assess quality of financial reporting**

Assessing the quality of financial reporting requires a broad range of measurements using models, proxies, qualitative characteristics and other elements of financial reports. In the literature, three different dimensions of financial reporting quality are frequently used: accrual-based models, accounting conservatism and earning managements (abnormal accrual). Many approaches have been used to measure and assess the financial reporting quality, and new approaches are still being developed. In the literature and prior studies, the reason behind the large reliance on using indirect measures (e.g., proxies for the financial reporting quality or stock prices) is that some of the financial reporting qualities are unobservable<sup>c</sup>.

The existence of standards to achieve the quality of financial reports will have a significant impact on the development and activation of the role of regulatory bodies through the establishment of structures to regulate the administrative process, enact laws regulating the work of companies and the custody of shareholders' rights, as well as the importance of oversight and the role assigned to the external auditor. The need for accountability increases investor confidence in the management of the company.

To measure the quality of financial reporting in terms of the qualitative characteristics (Ferdy Beest, Braam & Boelens, 2009), a compound measurement tool is constructed to comprehensively assess the quality of financial reporting in terms of the underlying fundamental qualitative characteristics (i.e., relevance and faithful representation) and the enhancing qualitative characteristics (i.e., understandability, comparability, verifiability and timeliness) as defined in 'An improved Conceptual Framework for Financial Reporting' of the FASB and the IASB (2008). They suggest that the measurement tool used in their study is a valid and reliable approach to assess the quality of financial reports. The measurement tool contributes to improve the quality assessment of financial reporting information and fulfil a request from both the FASB and IASB (2008) to make the qualitative characteristics operationally measurable.



### 3.3.2. Determinants of accounting information quality

Several factors are pointed out in the literature as influencers of companies' accounting information quality, such as corporate governance, audit firm, audit committee, ownership concentration, institutional investors and company internationalisation.

In this sense, a study done by (de Moura et al., 2017) revealed that a medium disclosure index is equivalent to 78%. Most of the companies were listed at differentiated governance levels, were audited by the big four and had an Audit Committee. The mean percentage of stockholder concentration was 41.37%; in 44% of the companies, the stockholders included institutional investors; and only 19% had their stocks traded on the American stock market. As regards, the determinants, which are audited by the big four, having an Audit Committee, including institutional investors amongst the stockholders and are traded on the American stock market, reflect a higher quality of information disclosure.

## 4. Case study

In this final part, in order to answer the following question: *how IT governance can have an impact on financial reporting quality through COBIT framework?*

We are going to present a practical study done by Rym Mansour<sup>d</sup> trying to answer the problematic question through three axes as follows:

1. Measuring the level of implementation of IT governance in enterprises through the use of COBIT framework in its four areas (PO, AI, DS and ME)
2. Determination of the quality of information in the financial reports prepared by enterprises through the characteristics of the main information: relevance and reliability and subcharacteristics: consistency and comparability
3. Determining the impact of IT governance at the level applied under the COBIT framework on the quality of information in financial reports prepared by enterprises.

The study arrived at:

1. The level of application of IT governance in Syrian banks reached 59.93% according to COBIT framework in its four areas:

PO	AI	DS	ME
58.27%	60.61	59.77	61.09

2. The level of information quality characteristics availability in the financial reports prepared by the Syrian banks:

Relevance	Reliability	Consistency	Comparability
74.44%	72.17%	69.97%	69.24%

3. The nature of the relationship between the level of ITG applied to enterprises in accordance with the COBIT framework in its four areas combined, and the quality of financial reports prepared by the Enterprises. The higher the level of IT governance in Syrian banks, the higher the quality characteristics of the financial reports prepared by Syrian banks.

## Conclusion

Many studies have shown that there are few standards of governance applied in technology. There is enthusiasm in many organisations but is still in the beginning of the application of this technology;

however, the experiments indicated that many of the initiatives failed and the only solution, according to most researchers, is to adopt a clear strategy related to ITG.

To achieve the best performance of the activities of organisations through IT, must choose the appropriate standards, instructions, special laws and tools, through which IT is controlled to achieve its objectives.

## References

- Al-Hila, A. A., Alhelou, E., Al Shobaki, M. J. & Abu Naser, S. S. (2017). The impact of applying the dimensions of IT governance in improving e-training-case study of the ministry of telecommunications and information technology in gaza governorates. *International Journal of Engineering and Information Systems*, 1(7), 194–219.
- Aqel, M. *Introduction to IT Governance Using COBIT Framework Fifth Annual Conference*, 5th October, 2013. IT Governance Institute.
- Beest, F. V., Braam, G. J. M. & Boelens, S. (2009). Quality of financial reporting: measuring qualitative characteristics.
- de Moura, G. D., Zanchi, M., Mazzioni, S., Rodrigues, F. F., Macedo, R. & Kruger, S. D. (2017). Determinants of accounting information quality in large publicly-held companies listed on BM&FBOVESPA. *Revista de Educacao e Pesquisa em Contabilidade*, 11(3), 322–338.
- Kerr, D. S. & Murthy, U. S. (2013). *The importance of the CobiT framework IT processes for effective internal control over financial reporting in organizations: an international survey*. *Information and Management*, 50(7), 590–597.
- Sari, E. N. (2015). Accounting practices effectiveness and good governance: mediating effects of accounting information quality in municipal office of Medan City. *Indonesia Research Journal of Finance and Accounting*, 6(2), 1–10.
- Tuttle, B. & Vandervelde, S. D. (2007). An empirical examination of CobiT as an internal control framework for information technology. *International Journal of Accounting Information Systems*, 8(4), 240–263.
- Yilmaz, B., Yilmaz, O. & Akmese, H. (2000). The role of accounting information system in business in terms of corporate governance and social responsibility of accounting in crisis periods and a research. *Emergence*, 16.